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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,811	12/27/2001	Shigeto Taga	36856.599	1917

7590

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EXAMINER

NGUYEN, DONGHAI D

ART UNIT

PAPER NUMBER

3729

DATE MAILED: 06/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/026,811

Applicant(s)

TAGA, SHIGETO

Examiner

Donghai D. Nguyen

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/546,899.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: the phrase "2000, current pending" should be changed to --2000, now US Patent No. 6,369,490--.

Appropriate correction is required.

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "METHOD OF MANUFACTURING SURFACE ACOUSTIC WAVE DEVICE".

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 16-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "wherein said base electrodes include a metallic material that reduces orientation of the intermediate electrodes" (claims 16, line 12-13) is vague and indefinite. It is unclear as to the exact metallic material that would reduce orientation of the intermediate electrodes. Further, as claimed, the metallic material can include all metals and/or their alloys because there is no specific recitation of the material in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

6. Claim 16 is rejected under 35 U.S.C. 102(a) as being anticipated by Applicant's admitted Prior art.

Applicant's admitted Prior Art discloses a method of manufacturing an electronic element, comprising the steps of: providing a piezoelectric substrate (21); forming electrode pads (16-18) on the piezoelectric substrate; disposing intermediate electrodes (22) on the electrode pads, said intermediate electrodes including base electrodes (23) located between said electrode pads and said intermediate electrodes; forming bump electrodes (11) on the intermediate electrodes; disposing the electronic element on a package (14) such that said bump electrodes opposes package electrodes (13); and press-bonding said package electrodes to said bump electrodes while applying ultrasonic waves or heat (Page 3, lines 6-7); wherein said base electrodes include a metallic material (Titanium etc.) that reduces orientation of the intermediate electrodes since Ti has a high bonding strength with Al as admitted by Applicant (Page 2, lines 24-27).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 16 and 18-20 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Applicant's admitted Prior Art.

Claim 16, to the extend Applicant disagrees that the Prior Art discloses the base electrodes include a metallic material that reduces orientation of the intermediate electrodes. It would have been obvious to one having ordinary skill the art to expect the same outcome as a result since Applicant's claimed invention method steps and the Prior Art method steps are identical processing steps and thus they will produce identical result absent of the exact metallic material being claimed.

Regarding to claim 20, Prior Art discloses the intermediate electrode is made of at least one of Al and an alloy including Al (Applicant's Spec. page 2).

Regarding claims 18 and 19, it would have been an obvious matter of design choice to choose any design intermediate electrode having a plurality of layers and the bump having a melting point at 450 degrees C or more, since Applicant has not disclosed that the claimed specifics melting point of the bump or plurality of layer of intermediate electrode, provides any advantage, is used for a particular purpose, or solves a stated problem and it appears that the invention would perform well with intermediate electrode and melting point of Applicant's admitted Prior Art.

9. Claims 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted Prior Art and US Patent 5,699,027 to Tsuji et al.

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Applicant's admitted Prior Art is silent regarding the step of sealing the package airtight with a cap. However, Tsuji et al. teach the step of sealing the package airtight (Col. 4, lines 59-61) with a cap (17) for preventing breaking the comb electrode (Col. 2, lines 5-10). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Prior Art to have the package being sealed airtight with a cap as taught by Tsuji et al for protecting the comb electrode.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donghai D. Nguyen whose telephone number is (703) 305-7859. The examiner can normally be reached on Monday-Friday (9:00-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter D. Vo can be reached on (703) 308-1789. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7307 for regular communications and (703) 305-3579 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

DN
June 2, 2003



PETER VO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700